



SEQUENCE LISTING

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Xu, Jean

<120> Vascular Endothelial Growth Factor-X

<130> 51935/004

<140> US/09/869,198

<141> 2001-06-21

<150> GB 9828377.3

<151> 1998-12-22

<150> US 60/124,967

<151> 1999-03-18

<150> US 60/164,131

<151> 1999-11-08

<160> 97

<170> PatentIn Ver. 2.0

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<212> PRT

<213> Homo sapiens

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20 25 30

Asn Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr Pro Arg Asn  
35 40 45

Thr Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile  
50 55 60

Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp  
65 70 75 80

Ile Cys Lys Tyr Asp Phe Val Glu Val Glu Glu Pro Ser Asp Gly Thr  
85 90 95

Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile  
100 105 110

Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe  
 115 120 125  
 Pro Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val Met Pro Gln  
 130 135 140  
 Phe Thr Glu Ala Val Ser Pro Ser Val Leu Pro Pro Ser Ala Leu Pro  
 145 150 155 160  
 Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala Phe Ser Thr Leu Glu Asp  
 165 170 175  
 Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp Gln Leu Asp Leu Glu Asp  
 180 185 190  
 Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys Ala Phe Val Phe Gly  
 195 200 205  
 Arg Lys Ser Arg Val Val Asp Leu Asn Leu Leu Thr Glu Glu Val Arg  
 210 215 220  
 Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser Val Ser Ile Arg Glu Glu  
 225 230 235 240  
 Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro Gly Cys Leu Leu Val Lys  
 245 250 255  
 Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu His Asn Cys Asn Glu Cys  
 260 265 270  
 Gln Cys Val Pro Ser Lys Val Thr Lys Lys Tyr His Glu Val Leu Gln  
 275 280 285  
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<213> Homo sapiens

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Ser Ser Asn Lys Glu Gln Tyr Gly Val Gln Asp Pro Gln His Glu Arg  
 35 40 45

Ile Ile Thr Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro  
 50 55 60  
 His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val  
 65 70 75 80  
 Glu Glu Asn Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu  
 85 90 95  
 Glu Asp Pro Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu  
 100 105 110  
 Glu Pro Ser Asp Gly Thr Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr  
 115 120 125  
 Val Pro Gly Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe  
 130 135 140  
 Val Ser Asp Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr  
 145 150 155 160  
 Asn Ile Val Met Pro Gln Phe Thr Glu Ala Val Ser Pro Ser Val Leu  
 165 170 175  
 Pro Pro Ser Ala Leu Pro Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala  
 180 185 190  
 Phe Ser Thr Leu Glu Asp Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp  
 195 200 205  
 Gln Leu Asp Leu Glu Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly  
 210 215 220  
 Lys Ala Phe Val Phe Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu  
 225 230 235 240  
 Leu Thr Glu Glu Val Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser  
 245 250 255  
 Val Ser Ile Arg Glu Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro  
 260 265 270  
 Gly Cys Leu Leu Val Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu  
 275 280 285  
 His Asn Cys Asn Glu Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys  
 290 295 300  
 Tyr His Glu Val Leu Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu  
 305 310 315 320  
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 gtacaagatc ctcagcatga gagaattatt actgtgtcta ctaatggaag tattcacagc 180  
 ccaaggtttc ctcatactta tccaagaaat acggtcttgg tatggagatt agtagcagta 240  
 gaggaaaaatg tatggataca acttacgttt gatgaaagat ttgggcttga agaccagaa 300  
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 aggataagat ttgtatctga tgaatatttt ccttctgaac cagggttctg catccactac 480  
 aacattgtca tgccacaatt cacagaagct gtgagtcctt cagtgtacc cccttcagct 540  
 ttgccactgg acctgcttaa taatgctata actgccttta gtaccttga agaccttatt 600  
 cgatatcttg aaccagagag atggcagttg gacttagaag atctatatag gccaaacttg 660  
 caacttcttg gcaaggcttt tgtttttgga agaaaatcca gagtgggtga tctgaacctt 720  
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 gaagaactaa agagaaccga taccattttc tggccaggtt gtctcctggg taaacgctgt 840  
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 gttactaaaa aataccacga ggtccttcag ttgagaccaa agaccggtgt caggggattg 960  
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<220>  
 <223> Description of Artificial Sequence:primer

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<210> 6  
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<220>  
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<400> 6 tttctaaagg aaatcaaatt ag	22
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<213> Artificial Sequence

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<223> Description of Artificial Sequence:primer

<400> 22

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<210> 23

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

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<210> 24

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

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<210> 25

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 25

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<210> 26

<211> 111

<212> PRT

<213> Homo sapiens

<400> 26

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			20						25					30	

Val	Leu	Val	Trp	Arg	Leu	Val	Ala	Val	Glu	Glu	Asn	Val	Trp	Ile	Gln
			35				40					45			

Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp Ile



50	55	60
Cys Lys Tyr Asp Phe Val Glu Val Glu Glu Pro Ser Asp Gly Thr Ile		
65	70	75 80
Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile Ser		
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Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe		
	100	105 110

<210> 27  
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 <212> PRT  
 <213> Homo sapiens

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35 40 45
Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr
50 55 60
Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn
65 70 75 80
Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro
85 90 95
Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu Glu Pro Ser
100 105 110
Asp Gly Thr Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly
115 120 125
Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp
130 135 140
Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val
145 150 155 160
Met Pro Gln Phe Thr Glu Ala Val
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<210> 28  
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 <212> DNA  
 <213> Homo sapiens

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cctcagcatg agagaattat tactgtgtct actaatggaa gtattcacag cccaagggtt 180  
cctcactactt atccaagaaa tacggtcttg gtatggagat tagtagcagt agaggaaaat 240  
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tgcaagtatg attttgtaga agttgaggaa cccagtgatg gaactatatt agggcgctgg 360  
tgtggttctg gtactgtacc aggaaaacag atttctaaag gaaatcaaat taggataaga 420  
tttgtatctg atgaatattt tccttctgaa ccagggttct gcatccacta caacattgtc 480  
atgccacaat tcacagaagc tgtg 504

<210> 29  
<211> 132  
<212> PRT  
<213> Homo sapiens

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20 25 30  
Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser Val Ser Ile Arg Glu  
35 40 45  
Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro Gly Cys Leu Leu Val  
50 55 60  
Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu His Asn Cys Asn Glu  
65 70 75 80  
Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys Tyr His Glu Val Leu  
85 90 95  
Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu His Lys Ser Leu Thr  
100 105 110  
Asp Val Ala Leu Glu His His Glu Glu Cys Asp Cys Val Cys Arg Gly  
115 120 125  
Ser Thr Gly Gly  
130

<210> 30  
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<212> DNA  
<213> Artificial Sequence

<220>  
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<221> n = a, t, g or c  
<222> (41)

<220>  
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 <222> (293)

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 gggagcacag gaggatagcc gcatcaccac cagcagctct tgcccagagc tgtgcagtgc 120  
 agtggctgat tctattagag aacgtatgcg ttatctccat ccttaatctc agttgtttgc 180  
 ttcaaggacc tttcatcttc aggatttaca gtgcattctg aaagaggaga catcaaacag 240  
 aattaggagt tgtgcaacag ctcttttgag aggaggctaa aggacaggag aanaggtctt 300

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 <211> 284  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

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 ttgtttgctt caaggacctt tcattcttcag gatttacagt gcattctgaa agaggagaca 120  
 tcaaacagaa ttaggagttg tgcaacagct cttttgagag gaggcctaaa ggacaggaga 180  
 aaaggtcttc aatcggtgaa agaaaattaa atgttgattt aaatagatca ccagctagtt 240  
 tcagagttac catgtacgta ttccactagc tgggttctgt attt 284

<210> 32  
 <211> 275  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

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 tagccgcac accaccagca gctcttgccc agagctgtgc agtgcagtgg ctgattctat 180  
 tagagaacgt atgcgttatc tccatcctta atctcagttg tttgcttcaa ggacctttca 240  
 tcttcaggat ttacagtgc tttctgaaaga ggaga 275

<210> 33  
 <211> 278  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

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 <221> n = a, t, g or c  
 <222> (248)

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ctttcatctt caggatttac agtgcattct gaaagaggag acatcaaaca gaattaggag 180
ttgtgcaaca gctcttttga gaggaggcct aaaggacagg agaaaagggtc ttcaatcgtg 240
gaaagaanat taaatgttgt attaaataga caccagct 278

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<210> 34

<211> 275

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 34

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ggaggatagc cgcataacca ccagcagctc ttgccagag ctgtgcagtg cagtggctga 60
ttctattaga gaacgtatgc gttatctcca tccttaatat cagttgtttg cttcaaggac 120
ctttcatctt caggatttac atgcattctg aaagaggaga catcaaacag aattaggagt 180
tgtgcaacag ctctttttgag aggaggccta aaggacagga gaaaagggtc tcaatcgtgg 240
aaagaaaatt aaatgttgtg ttaaatagat cacca 275

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<210> 35

<211> 261

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Human EST

<400> 35

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tgcctgttgt ctccacaatt gcaatgaatg tcaatgtgtc ccaagcaaaag ttactaaaaa 120
ataccacgag gtccttcagt tgagaccaa gaccgggtgtc aggggattgc acaaatcact 180
caccgacgtg gccctggagc accatgagga gtgtgactgt gtgtgcagag ggagcacagg 240
aggatagccg catcaccacc a 261

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<210> 36

<211> 279

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 36

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agaaaatcca gagtgggtgga tctgaacctt ctaacagagg aggtaagatt atacagctgc 60
acacctcgta acttctcagt gtccataagg gaagaactaa agagaaccga taccattttc 120
tggccagggt gtctcctggg taaacgctgt ggtgggaact gtgcctgttg tctccacaat 180
tgcaatgaat gtcaatgtgt cccaagcaaa gttactaaaa aataccacga ggtccttcag 240
ttgagaccaa agaccgggtg caggggattg cacaaatca 279

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<210> 37

<211> 262

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Human EST

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aactaaagag aaccgatacc attttctggc caggttgtct cctgggttaa cgctgtggtg 180  
ggaactgtgc ctgtgtgtct ccacaattgc aatgaatgtc aatgtgtccc aagcaaagtt 240  
actaaaaaat accacgaggt cc 262

<210> 38  
<211> 289  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: Human EST

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<221> n = a, t, g or c  
<222> (35)

<220>  
<221> n = a, t, g or c  
<222> (51)

<220>  
<221> n = a, t, g or c  
<222> (125)

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gaaanaaaaat taaatgttgt attaaataga tcaccagcta gtttcagagt taccatgtac 180  
gtattccact agctgggttc tgtatttcag ttctttcgat acggcttagg gtaatgtcag 240  
tacaggaaaa aaactgtgca agtgagcacc tgattccgtt gccttgctt 289

<210> 39  
<211> 245  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

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cagagggagc acaggaggat agccgcatca ccaccagcag ctcttgccca gagctgtgca 180  
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<210> 40  
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<212> DNA  
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<220>  
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<222> (86)

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<222> (191)

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attctgaaag aggagacatc aaacagaatt aggagttgtg caacagctct tttgagagga 180  
ggcctaaagg ncaggagaaa aggtcttcaa tcgtggaaag aaaattaaat gttgtattaa 240  
atagatc 247

<210> 41  
<211> 232  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

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aactaaagag aaccgatacc attttctggc caggttgtct cctgggttaa cgctgtgggtg 180  
ggaactgtgc ctgttgtctc cacaattgca atgaatgtca atgtgtccca ag 232

<210> 42  
<211> 253  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<400> 42  
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ttaaatagat caccagctag tttcagagtt accatgtacg tattccacta gctgggttct 180  
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gtgagcacct gat 253

<210> 43  
<211> 265  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (238)

<220>  
<221> n = a, t, g or c  
<222> (246)..(247)

<220>  
<221> n = a, t, g or c  
<222> (252)

<220>  
<221> n = a, t, g or c  
<222> (257)

<400> 43  
tgcaacagct cttttgagag gaggcctaaa ggacaggaga aaaggtcttc aatcgtggaa 60  
agaaaaattaa atgttgattt aaatagatca ccagctagtt tcagagttac catgtacgta 120  
ttccactagc tgggttctgt atttcagttc tttcgatacg gcttagggta atgtcagtac 180  
aggaaaaaaa ctgtgcaagt gagcacctga ttccgttgcc ttgcttaacc ctaaagcncc 240  
atgtcnnggg cnaaaancga aaaat 265

<210> 44  
<211> 291  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (61)

<220>  
<221> n = a, t, g or c  
<222> (66)

<220>  
<221> n = a, t, g or c  
<222> (88)

<220>  
<221> n = a, t, g or c  
<222> (141)

<220>  
<221> n = a, t, g or c  
<222> (155)

<220>  
<221> n = a, t, g or c  
<222> (172)

<220>  
<221> n = a, t, g or c

<222> (177)

<220>

<221> n = a, t, g or c

<222> (227)

<220>

<221> n = a, t, g or c

<222> (229)

<220>

<221> n = a, t, g or c

<222> (274)

<400> 44

```
ccttaatctc agttgtttgc ttcaaggacc tttcatcttc aggatttaca gtgcattctg 60
naagangaga catcaaacag aattaggngt tgtgcaaaag ctcttttgag aggaggccta 120
aaggacagga gaaaaggtct ncaatcgtgg aaagnaaatt aaatgttgta tnaaatngat 180
caccagctag tttcagagtt accatgtacg tattccacta gctgggncng tattcagtct 240
ttcgaacgg cttagggtta tgtcagtaca gganaaaaac tgtgcagtga g          291
```

<210> 45

<211> 279

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (205)

<220>

<221> n = a, t, g or c

<222> (240)

<220>

<221> n = a, t, g or c

<222> (254)

<400> 45

```
attaaataga tcaccagcta gtttcagagt taccatgtac gtattccact agctgggttc 60
tgtatttcag ttctttcgat acggcttagg gtaatgtcag tacaggaaaa aaactgtgca 120
agtgagcacc tgattccgtt gccttggctt aactctaaag ctccatgtcc tgggcctaaa 180
atcgtataaaa atctggattt ttttnttttt ttttgcgcat attcacatat gttaaaccagn 240
acattctatg tacnacaaac ctggttttta aaaaggaac          279
```

<210> 46

<211> 181

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST



<400> 46  
ggctagtttc agagttacca tgtacgtatt ccactagctg ggttctgtat ttcagttctt 60  
tcgatacggc ttagggtaat gtcagtacag gaaaaaaact gtgcaagtga gcacctgatt 120  
ccgttgccctt gcttaactct aaagctccat gtcttgggcc taaaatcgta taaaatctgg 180  
a 181

<210> 47  
<211> 184  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (54)

<400> 47  
aatagatcac cagctagttt cagagttacc atgtacgtat tccactagct gggntctgta 60  
tttcagttcc tttcgatacg gcttagggta atgtcagtac agggaaaaaag ctgtgcaagt 120  
gagcacctga ttccgttgcc ttgcttaact ctaaagctcc atgtcctggg cctaaaaatcg 180  
tata 184

<210> 48  
<211> 290  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<400> 48  
aaaggaacta tgttgctatg aattaaactt gtgtcgtgct gataggacag actggatttt 60  
tcatatttct tattaataatt tctgccattht agaagaagag aactacattc atggtttgga 120  
agagataaac ctgaaaagaa gagtggcctt atcttcactt tatcgataag tcagttttatt 180  
tgtttcattg tgtacatttt tatattctcc ttttgacatt ataactgttg gctttttctaa 240  
tcttggttaa tatatctatt tttaacaaag gtattttaata ttctttttta 290

<210> 49  
<211> 300  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (41)

<220>  
<221> n = a, t, g or c  
<222> (293)

<400> 49  
 cacaaatcac tcaccgacgt ggccctggag caccatgagg ngtgtgactg tgtgtgcaga 60  
 gggagcacag gaggatagcc gcatcaccac cagcagctct tgcccagagc tgtgcagtgc 120  
 agtggctgat tctattagag aacgtatgcg ttatctccat ccttaatctc agttgtttgc 180  
 ttcaaggacc tttcatcttc aggatttaca gtgcattctg aaagaggaga catcaaacag 240  
 aattaggagt tgtgcaacag ctcttttgag aggaggctaa aggacaggag aanaggctct 300

<210> 50  
 <211> 284  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

<400> 50  
 tgcagtgcag tggctgattc tattagagaa cgtatgcgtt atctccatcc ttaatctcag 60  
 ttgtttgctt caaggacctt tcattcttcag gatttacagt gcattctgaa agaggagaca 120  
 tcaaacagaa ttaggagttg tgcaacagct cttttgagag gaggcctaaa ggacaggaga 180  
 aaaggtcttc aatcgtggaa agaaaattaa atgttgtatt aaatagatca ccagctagtt 240  
 tcagagttac catgtacgta ttccactagc tgggttctgt attt 284

<210> 51  
 <211> 301  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

<220>  
 <221> n = a, t, g or c  
 <222> (47)

<220>  
 <221> n = a, t, g or c  
 <222> (253)

<400> 51  
 cttgttaaatt atatctatatt ttaccaaagg tatttaatat tctttantta tgacaactta 60  
 gatcaactat ttttagcttg gtaaattttt ctaaacacaa ttgttatagc cagaggaaca 120  
 aagatgatat aaaatattgt tgctctgaca aaaatacatg tatttcattc tcgtatgggtg 180  
 ctagagttag attaatctgc attttaaaaa actgaattgg aatagaattg gtaagttgca 240  
 aagacttttt ganaataatt aaattatcat atcttccatt cctgttattg ggggagaaaa 300  
 t 301

<210> 52  
 <211> 275  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

<400> 52  
 cacgaggtcc ttcagttgag accaaagacc ggtgtcaggg gattgcacaa atcactcacc 60  
 gacgtggccc tggagcacca tgaggagtgt gactgtgtgt gcagagggag cacaggggga 120

```

tagccgcac accaccagca gctcttgccc agagctgtgc agtgcagtgg ctgattctat 180
tagagaacgt atgcgttata tccatcctta atctcagttg ttgcttcaa ggacctttca 240
tcttcaggat ttacagtga ttctgaaaga ggaga 275

```

```

<210> 53
<211> 288
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence: Human EST

```

```

<400> 53
ttaaaaagga actatgttgc tatgaattaa acttgtgtca tgctgatagg acagactgga 60
tttttcatat ttcttattaa aatttctgcc atttagaaga agagaactac attcatgggt 120
tggaagagat aaacctgaaa agaagagtgg ccttatcttc actttatcga taagtcagtt 180
tatttgtttc attgtgtaca tttttatatt ctcttttga cattataact gttggctttc 240
taatctgtta aatatatcta tttttaccaa aggtatttaa tattcttt 288

```

```

<210> 54
<211> 278
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence: Human EST

```

```

<220>
<221> n = a, t, g or c
<222> (248)

```

```

<400> 54
ggaggatagc cgcacacca ccagcagctc ttgcccagag ctgtgcagtg cagtggctga 60
ttctattaga gaacgtatgc gttatctcca tcttaatat cagttgtttg cttcaaggac 120
ctttcatctt caggatttac agtgcattct gaaagaggag acatcaaaca gaattaggag 180
ttgtgcaaca gctcttttga gaggaggcct aaaggacagg agaaaaggct tccaatcgtg 240
gaaagaanat taaatgttgt attaaataga caccagct 278

```

```

<210> 55
<211> 275
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence: Human EST

```

```

<400> 55
ggaggatagc cgcacacca ccagcagctc ttgcccagag ctgtgcagtg cagtggctga 60
ttctattaga gaacgtatgc gttatctcca tcttaatat cagttgtttg cttcaaggac 120
ctttcatctt caggatttac atgcattctg aaagaggaga catcaaacag aattaggagt 180
tgtgcaacag ctcttttgag aggaggccta aaggacagga gaaaaggctc tcaatcgtg 240
aaagaaaatt aaatgttgta ttaaatagat cacca 275

```

```

<210> 56
<211> 261
<212> DNA
<213> Artificial Sequence

```

<220>

<223> Description of Artificial Sequence: Human EST

<400> 56

```
gagaaccgat accattttct ggccagggttg tctcctgggtt aaacgctgtg gtgggaactg 60
tgctgttgt ctccacaatt gcaatgaatg tcaatgtgtc ccaagcaaag ttactaaaaa 120
ataccacgag gtccttcagt tgagacaaaa gaccgggtgtc aggggattgc acaaatcact 180
caccgacgtg gccctggagc accatgagga gtgtgactgt gtgtgcagag ggagcacagg 240
aggatagccg catcaccacc a                                     261
```

<210> 57

<211> 279

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 57

```
agaaaatcca gagtgggtgga tctgaacctt ctaacagagg aggtaagatt atacagctgc 60
acacctcgta acttctcagt gtccataagg gaagaactaa agagaaccga taccattttc 120
tgccagggtt gtctcctggt taaacgctgt ggtgggaact gtgcctgttg tctccacaat 180
tgcaatgaat gtcaatgtgt cccaagcaaa gttactaaaa aataccacga ggtccttcag 240
ttgagaccaa agaccggtgt caggggattg cacaaatca                                     279
```

<210> 58

<211> 259

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 58

```
agatgatata aaatattgtt gctctgacaa aaatacatgt atttcattct cgtatgggtgc 60
tagagttaga ttaatctgca ttttaaaaaa ctgaattgga atagaattgg taagttgcaa 120
agactttttg aaaataatta aattatcata tcttccattc ctgttattgg agatgaaaaat 180
aaaaagcaac ttatgaaagt agacattcag atccagccat tactaaccta ttcctttttt 240
ggggaaatct gagcctagc                                     259
```

<210> 59

<211> 284

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 59

```
tttttaaaaa ggaactatgt tgctatgaat taaacttgtg tcgtgctgat aggacagact 60
ggatttttca tatttcttat taaaatttct gccatttaga agaagagaac tacattcatg 120
gtttggaaga gataaacctg aaaagaagag tggcctatct tcactttatc gataagtcag 180
tttatttggt tcattgtgta catttttata ttctcctttg acatataact gttggctttt 240
ctaactgtgt aaatatatct atttttacca aaggatttta atat                                     284
```

<210> 60

<211> 262  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 60

```
aggaaatcaa attaggataa gatttgtatc tgatgaatat tttccttctg aaccttctaa 60
cagaggaggt aagattatac agctgcacac ctcgtaactt ctcagtgtcc ataaggggaag 120
aactaaagag aaccgatacc attttctggc caggttgtct cctgggttaa cgctgtggtg 180
ggaactgtgc ctgttgtctc ccacaattgc aatgaatgtc aatgtgtccc aagcaaagtt 240
actaaaaaat accacgaggt cc                                     262
```

<210> 61

<211> 289

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (45)

<220>

<221> n = a, t, g or c

<222> (51)

<220>

<221> n = a, t, g or c

<222> (125)

<400> 61

```
atttcattctt caggatttac agtgcattct gaaanaggag aaatcaaaca naattaggag 60
ttgtgcaaca gctcttttga gaggaggcct aaaggacagg agaaaaggtc ttcaatcgtg 120
gaaanaaaat taaatgttgt attaaataga tcaccagcta gtttcagagt taccatgtac 180
gtattccact agctgggttc tgtatttcag ttctttcgat acggcttagg gtaatgtcag 240
tacaggaaaa aaactgtgca agtgagcacc tgattccggt gccttgctt          289
```

<210> 62

<211> 251

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (10)

<220>

<221> n = a, t, g or c

<222> (246)

<400> 62  
 ttagcttggg aaatttttct aaacacaatt gttatagcca gaggaacaaa gatgatataa 60  
 aatattgttg ctctgacaaa aatacatgta ttccattctc gtatgggtgct agagttagat 120  
 taatctgcat tttaaaaaac tgaattggaa tagaattggg aagttgcaaa gactttttga 180  
 aaataattaa attatcatat cttccattcc tgttattgga gatgaaaata aaaagcaact 240  
 tatganagta g 251

<210> 63  
 <211> 252  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

<220>  
 <221> n = a, t, g or c  
 <222> (250)

<400> 63  
 cttttttatg acaacttaga tcaactatct ttagcttggg aaatttttct aaacacaatt 60  
 gttatagcca gaggaacaaa gatgatataa aatattgttg ctctgacaaa aatacatgta 120  
 ttccattctc gtatgggtgct agagttagat taatctgcat tttaaaaaac tgaattggaa 180  
 tagaattggg aagttgcaaa ggctttttga aaataattaa attatcatat cttccattcc 240  
 tgttattggg gg 252

<210> 64  
 <211> 245  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

<400> 64  
 caaagtact aaaaaatacc acgaggtcct tcagttgaga ccaaagaccg gtgtcagggg 60  
 attgcacaaa tcaactaccg acgtggccct ggagcaccat gaggagtgtg actgtgtgtg 120  
 cagagggagc acaggaggat agccgcatca ccaccagcag ctcttgccca gagctgtgca 180  
 gtgcagtggc tgattctatt agagaacgta tgcgttatct ccacccctaa tctcagttgt 240  
 ttgct 245

<210> 65  
 <211> 245  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Human EST

<400> 65  
 agataaacct gaaaagaaga gtggccttat cttcacttta tcgataagtc agtttatttg 60  
 ttccattgtg tacattttta tattctcctt ttgacattat aactgttggc ttttctaata 120  
 ttgttaaata tatctatttt taccaaaggc atttaaatatt cttttttatg acaacttaga 180  
 tcaactatct ttagcttggg aaatttttct aaacacaatt gttatagcca gaggaacaaa 240  
 gatga 245

<210> 66  
<211> 243  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 66  
ctggattttt catatttctt attaaaattt ctgccattta gaagaagaga actacattca 60  
tggtttggaa gagataaacc tgaaaagaag agtggcctta tcttcacttt atcgataagt 120  
cagtttattt gtttcattgt gtacattttt atattctcct tttgacatta taactgttgg 180  
cttttcta at ctgtttaa at atatctattt ttaccaaagg tatttaatat ttttttttat 240  
gac 243

<210> 67  
<211> 244  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (64)

<220>

<221> n = a, t, g or c

<222> (215)

<400> 67  
gctcatattc acatatgtaa accagaacat tctatgtact acaaacctgg tttttaaaaa 60  
gganctatgt tgctatgaat taaacttggt tcgtgctgat aggacagact ggatttttca 120  
tatttcttat taaaatttct gccatttaga agaagagaac tacattcatg gtttgggaaga 180  
gataaacctg aaaagaagag tggccttatc ttcantttat cgataagtca gtttatttgt 240  
ttca 244

<210> 68  
<211> 247  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (2)

<220>

<221> n = a, t, g or c

<222> (86)

<220>

<221> n = a, t, g or c

<222> (190)

<400> 68

```
angagttgcc cagagctgtg cagtgcagtg gctgattcta ttagagaacg tatgcttat 60
ctccatcctt aatctcagtt gtttgnttca aggacctttc atcttcagga tttacagtgc 120
attctgaaag aggagacatc aaacagaatt aggagttgtg caacagctct tttgagagga 180
ggcctaaagg ncaggagaaa aggtcttcaa tcgtggaaag aaaattaaat gttgtattaa 240
atagatc 247
```

<210> 69

<211> 233

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 69

```
aaagatgata taaaatattg ttgctctgac aaaaatacat gtatttcatt ctcgatatggt 60
gctagagtta gattaatctg cattttaaaa aactgaattg gaatagaatt ggtaagttgc 120
aaagactttt tgaaaataat taaattatca tatcttccat tcctgttatt ggagatgaaa 180
ataaaaagca acttatgaaa gtagacattc agatccagcc attactaacc tat 233
```

<210> 70

<211> 232

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 70

```
aggaaatcaa attaggataa gatttgtatc tgatgaatat tttccttctg aaccttctaa 60
cagaggaggt aagattatac agctgcacac ctcgtaactt ctcagtgtcc ataagggaag 120
aactaaagag aaccgatacc attttctggc caggttgtct cctgggttaa cgctgtgggtg 180
ggaactgtgc ctgttgtctc cacaattgca atgaatgtca atgtgtccca ag 232
```

<210> 71

<211> 253

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 71

```
gtgcattctg aaagaggaga catcaaacag aattaggagt tgtgcaacag ctcttttgag 60
aggaggccta aaggacagga gaaaagggtct tcaatcgtgg aaagaaaatt aaatgttgta 120
ttaaatagat caccagctag tttcagagtt accatgtacg tattccacta gctgggttct 180
gtatttcagt tctttcgata cggcttaggg taatgtcagt acaggaaaaa aactgtgcaa 240
gtgagcacct gat 253
```

<210> 72

<211> 233

<212> DNA

<213> Artificial Sequence



<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (48)

<400> 72

```
tgtacatttt tatattctcc ttttgacatt ataactgttg gcttttcnaa tcttggttaa 60
tatatctatt tttaccaaag gtatttaata ttctttttta tgacaactta gatcaactat 120
ttttagcttg gtaaattttt ctaaacacaa ttgttatagc cagaggaaca aagatgatat 180
aaaatattgt tgctctgaca aaaatacatg tatttcattc tcgtatggtg cta 233
```

<210> 73

<211> 250

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (53)

<400> 73

```
cacaattggt atagccagag gaacaaagat gatataaaat attggtgctc tgncaaaaat 60
acatgtattt cattctcgta tgggtgctaga gttagattaa tctgcatttt aaaaaactga 120
attggaatag aattggtaag ttgcaaagac tttttgaaaa taattaaatt atcatatctt 180
ccattcctgt tattggagat gaaaataaaa agcaacttat gaaagtaaatt tcagatccac 240
cattactaac 250
```

<210> 74

<211> 247

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 74

```
atttcattct cgtatggtgc tagagttaga ttaatctgca ttttaaaaaa ctgaattgga 60
atagaattgg taagttgcaa agactttttg aaaataatta aattatcata tcttccattc 120
ctgttattgg agatgaaaat aaaaagcaac ttatgaaagt agacattcag atccagccat 180
tactaaccta ttcctttttt ggggaaatct gagcctagct cagaaaaaca taaagcacct 240
tgaaaaaa 247
```

<210> 75

<211> 265

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (238)

<220>

<221> n = a, t, g or c

<222> (246)..(247)

<220>

<221> n = a, t, g or c

<222> (252)

<220>

<221> n = a, t, g or c

<222> (257)

<400> 75

```
tgcaacagct cttttgagag gaggcctaaa ggacaggaga aaaggtcttc aatcgtggaa 60
agaaaaattaa atgttgattt aaatagatca ccagctagtt tcagagttac catgtacgta 120
ttccactagc tgggttctgt atttcagttc ttccgatacg gcttagggta atgtcagtac 180
agggaaaaaaa ctgtgcaagt gagcacctga ttccgttgcc ttgcttaacc ctaaagcncc 240
atgtcnnggg cnaaaancga aaaat                                     265
```

<210> 76

<211> 251

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (134)

<220>

<221> n = a, t, g or c

<222> (157)

<400> 76

```
tttctaaaca caattgttat agccagagga acaaagatga tataaaatat tgttgctctg 60
acaaaaatac atgtatttca ttctcgtatg gtgctagagt tagattaatc tgcattttta 120
aaaactgaat tggnatagaa ttggtaagtt gcaaaagnctt ttgaaaaata attaaattat 180
catatcttcc attcctgtta ttggaggatg gaaaataaaa agcaacttat ggaaagtagg 240
acattcagat c                                     251
```

<210> 77

<211> 291

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (61)

<220>  
<221> n = a, t, g or c  
<222> (66)

<220>  
<221> n = a, t, g or c  
<222> (88)

<220>  
<221> n = a, t, g or c  
<222> (141)

<220>  
<221> n = a, t, g or c  
<222> (155)

<220>  
<221> n = a, t, g or c  
<222> (172)

<220>  
<221> n = a, t, g or c  
<222> (177)

<220>  
<221> n = a, t, g or c  
<222> (227)

<220>  
<221> n = a, t, g or c  
<222> (229)

<220>  
<221> n = a, t, g or c  
<222> (284)

<400> 77  
ccttaatctc agttgtttgc ttcaaggacc tttcatcttc aggatttaca gtgcattctg 60  
naagangaga catcaaacag aattaggngt tgtgcaaaaag ctcttttgag aggaggccta 120  
aaggacagga gaaaagggtct ncaatcgtgg aaagnaaatt aaatgttgta tnaaatngat 180  
caccagctag tttcagagtt accatgtacg tattccacta gctgggncng tattcagtct 240  
ttcggaacgg cttagggttaa tgtcagtaca gganaaaaac tgtgcagtga g 291

<210> 78  
<211> 253  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (84)

<220>  
<221> n = a, t, g or c  
<222> (143)

<400> 78  
gtactacaaa cctgggtttt aaaaaggaac tatgttgcta tgaattaaac ttgtgtccat 60  
gctgatagga cagactggat tttncatatt tcttattaaa atttctgcca tttagaagaa 120  
gagaactaca ttcattgggtt ggnagagata aacctgaaaa gaagagtggc cttatcttca 180  
ctttatcgat aagtcagttt atttgtttca tgtgtacatt tttatattct cctttgacat 240  
ataacgtggc ttt 253

<210> 79  
<211> 204  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (190)

<400> 79  
ttatattctc cttttgacat tataactggt ggcttttcta atcttggtta atatattctat 60  
ttttacaaaa ggtatttaaat attctttttt atgacaactt agatcaacta ttttttagctt 120  
ggtaaatattt tctaaacaca attgttatag ccagaggaac aaagatgata taaaatattg 180  
ttgctctgan aaaaatacat gtat 204

<210> 80  
<211> 303  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (2)

<220>  
<221> n = a, t, g or c  
<222> (87)..(114)

<220>  
<221> n = a, t, g or c  
<222> (267)

<220>  
<221> n = a, t, g or c  
<222> (272)

<220>  
<221> n = a, t, g or c

<222> (300)

<400> 80

```
anactgtgca agtgagcacc tgattccggt gccttgctta actctaaagc tccatgtcct 60
gggcctaaaa tcgtataaaa tctggannnn nnnnnnnnnn nnnngctcat attcacatat 120
gtaaaccaga acattctatg tactacaaac ctgggtttta aaaaggaact atgttgctat 180
gaattaaact tgtgtcgtgc tgataggaca gactggattt ttcataattc ttattaaaaat 240
ttctgccatt agaagaagag aactacnttc anggtttgga agagataacc ctgaaaagan 300
ggg 303
```

<210> 81

<211> 228

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (112)

<400> 81

```
gctcatattc acatatgtaa accagaacat tctatgtact acaaacctgg tttttaaaaa 60
ggaactatth gctatgaatt aaacttgtgt cgtgctgata ggacagactg gntttttcat 120
atttcttatt anaatttctg ccattagaag aagagaacta cattcatggt ttggaagaga 180
taaactgaa aagaagagtg gcctatthca ctttatcgat aagtcagt 228
```

<210> 82

<211> 193

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 82

```
gctcatattc acatatgtaa accagaacat tctatgtact acaaacctgg tttttaaaaa 60
ggaactatgt tgctatgaat taaacttgtg tcgtgctgat aggacagact ggatttttca 120
tatttcttat taaaatttct gccatttaga agaagagAAC tacattcatg gtttggaaga 180
gataaacctg aaa 193
```

<210> 83

<211> 282

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (42)

<220>

<221> n = a, t, g or c

<222> (94)

<220>

<221> n = a, t, g or c

<222> (235)

<220>

<221> n = a, t, g or c

<222> (269)

<400> 83

```
aaaaaactga attggaatag aattggtaag ttgcaaagac tntttgaaaa taattaaatt 60
atcatatctt ccattcctgt tattggagat gaanataaaa agcaacttat gaaagtagac 120
attcagatcc agccattact aacctattcc ttttttgggg aaatctgagc ctagctcaga 180
aaaacataaa gcaccttgaa aaagacttgg cagcttcctg ataaagcgtg ctgtntgtca 240
gtaggaacac atcctattta ttgtgatgnt gtggtttatt at 282
```

<210> 84

<211> 279

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (205)

<220>

<221> n = a, t, g or c

<222> (240)

<220>

<221> n = a, t, g or c

<222> (254)

<400> 84

```
attaaataga tcaccagcta gtttcagagt taccatgtac gtattccact agctgggttc 60
tgtatttcag ttctttcgat acggcttagg gtaatgtcag tacaggaaaa aaactgtgca 120
agtgagcacc tgattccggt gccttggcctt aactctaaag ctccatgtcc tgggcctaaa 180
atcgtataaa atctggattt tttntttttt ttttgcgcat attcacatat gttaaaccagn 240
acattctatg tacnacaaac ctgggttttta aaaaggaac 279
```

<210> 85

<211> 181

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 85

```
ggctagtttc agagttacca tgtacgtatt ccactagctg ggttctgtat ttcagttctt 60
tcgatacggc ttagggtaat gtcagtacag gaaaaaaact gtgcaagtga gcacctgatt 120
ccgttgccct gcttaactct aaagctccat gtccctgggcc taaaatcgta taaaatctgg 180
```

a

181

<210> 86

<211> 269

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 86

```
tggttaagttg caaagacttt ttgaaaataa tttaaattatc atatcttcca ttcctgttat 60
tggagatgaa aataaaaagc aacttatgaa agtagacatt cagatccagc cattactaac 120
ctattccttt ttggggaaa tctgagccta gctcagaaaa acataaagca ccttgaaaaa 180
gacttggcag cttcctgata aagcgtgctg tgctgtgcag tagggaacac atcctattta 240
ttgtgatgtt gtggtttata tcctaaacc                                269
```

<210> 87

<211> 184

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (54)

<400> 87

```
aatagatcac cagctagttt cagagttacc atgtacgtat tccactagct gggntctgta 60
tttcagttcc ttctgatacg gcttagggta atgtcagtac aggaaaaaag ctgtgcaagt 120
gagcacctga ttccgttgcc ttgcttaact ctaaagctcc atgtcctggg cctaaaaatcg 180
tata                                              184
```

<210> 88

<211> 164

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (53)

<220>

<221> n = a, t, g or c

<222> (78)..(79)

<220>

<221> n = a, t, g or c

<222> (106)

<220>

<221> n = a, t, g or c

<222> (119)

<220>

<221> n = a, t, g or c

<222> (121)

<400> 88

```
agataaacct gaaaagaaga gtggccttat nttcacttta tcgataagtc agnttatttg 60
tttcattgtg tacatttnna tattctcctt ttgacattat aactgntggc ttttctaanc 120
ntgttaaata tatctatttt taccaaaggt atttaatat cttt 164
```

<210> 89

<211> 143

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 89

```
tatggtgcta gagttagatt aatctgcatt ttaaaaaact gaattggaat agaattggta 60
agttgcaaag acttttttgaa aataattaaa ttatcatatc ttccattcct gttattggag 120
atgaaaataa aaagcaactt atg 143
```

<210> 90

<211> 164

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (35)

<220>

<221> n = a, t, g or c

<222> (51)

<220>

<221> n = a, t, g or c

<222> (132)

<220>

<221> n = a, t, g or c

<222> (141)

<220>

<221> n = a, t, g or c

<222> (145)..(146)

<400> 90

```
ttttttnttt tgctcatatt cacatatgta aaccngaaca ttctatgtac nacaaacctg 60
gttttttaaaa aggaactatg ttgctatgaa ttaaacttgt gtcgtgctga taggacagac 120
tggatttttc anatttctta ntaannttcc tgccatttag aaga 164
```



<210> 91  
<211> 244  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (98)..(115)

<400> 91  
gtacaggaaa aaaactgtgc aagtgagcac ctgattccgt tgccttgctt aactctaaag 60  
ctccatgtcc tgggcctaaa atcgtataaa atctggannn nnnnnnnnnn nnnnnngctca 120  
tattcacata tgtaaaccag aacattctat gtactacaaa cctgggtttt aaaaaggaac 180  
tatgttgcta tgaattaaac ttgtgtcgtg ctgataggac agactggatt tttcatattt 240  
ctta 244

<210> 92  
<211> 254  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (20)

<220>  
<221> n = a, t, g or c  
<222> (26)

<220>  
<221> n = a, t, g or c  
<222> (52)

<220>  
<221> n = a, t, g or c  
<222> (61)

<220>  
<221> n = a, t, g or c  
<222> (144)

<220>  
<221> n = a, t, g or c  
<222> (225)

<220>  
<221> n = a, t, g or c  
<222> (236)

<220>  
<221> n = a, t, g or c  
<222> (240)

<220>  
<221> n = a, t, g or c  
<222> (242)

<400> 92  
gcaaagacttt tttganaatn attaanattat catatcttcc attcctgtta tnggagatga 60  
naataaaaaag caacttatga aagtagacat tcagatccag ccattactaa cctattcctt 120  
ttttggggaa atctgagcct agcncagaaa aacataaagc accttgaaaa agacttggca 180  
gcttcctgat aaagcgtgct gtgctgtgca gtaggaacac atccnattta ttgtgntgtn 240  
gnggttttat gatc 254

<210> 93  
<211> 243  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (103)..(120)

<400> 93  
tgtcagtaca ggaaaaaac tgtgcaagtg agcacctgat tccgttgcct tgcttaactc 60  
taaagctcca tgtcctgggc ctaaaatcgt ataaaatctg gannnnnnnn nnnnnnnnnn 120  
gctcatattc acatatgtaa accagaacat tctatgtact acaaacctgg tttttaaaaa 180  
ggaactatgt tgctatgaat taaacttggt tcatgctgat aggacagact ggatttttca 240  
tat 243

<210> 94  
<211> 244  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (136)

<400> 94  
aattatcata tcttccattc ctgttatttg agatgnaaat aaaaagcaac ttatgaaagt 60  
agacattcag atccagccat tactaaccta ttctttttt ggggaaatct gagcctagct 120  
cagaaaaaca taaagcacct tgaaaaagac tgtcagcttc ctgataaagc gtgctgtgct 180  
gtgcagtagg aacacatcct atttattgtg atgttgtggt tttattatct taaactcgtt 240  
ccat 244

<210> 95  
<211> 152

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Human EST

<220>  
<221> n = a, t, g or c  
<222> (2)

<220>  
<221> n = a, t, g or c  
<222> (16)

<220>  
<221> n = a, t, g or c  
<222> (33)

<220>  
<221> n = a, t, g or c  
<222> (34)

<220>  
<221> n = a, t, g or c  
<222> (82)

<220>  
<221> n = a, t, g or c  
<222> (97)

<220>  
<221> n = a, t, g or c  
<222> (108)

<220>  
<221> n = a, t, g or c  
<222> (125)

<220>  
<221> n = a, t, g or c  
<222> (127)

<220>  
<221> n = a, t, g or c  
<222> (137)

<400> 95  
anagatgata taaaanattg ttgctctgac aannatacat gtatttcatt ctcgatatggt 60  
gctagagtta gattaatctg cnttttaaaa aactganttg gaatagantt ggtaagttgc 120  
aaagncnttt gaaaatnatt aagttatcag at 152

<210> 96  
<211> 292  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 96

```
ttccattcct gttattggag atgaaaataa aaagcaactt atgaaagtag acattcagat 60
ccagccatta ctaacctatt ccttttttgg ggaaatctga gcctagctca gaaaaacata 120
aagcaccttg aaaaagactt ggcagcttcc tgataaagcg tgctgtgctg tgcagtagga 180
acacatccta tttattgtga tgttgtgggt ttattatcta aactctgttc catacacttg 240
tataaatata tggatatatt tatgtacaga agtatgtctc ttaaccagtt ca 292
```

<210> 97

<211> 308

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (46)

<400> 97

```
cttcattcc tgttattgga gatgaaaata aaaagcaact tatganagta gacattcaga 60
tccagccatt actaacctat tccttttttg gggaaatctg agcctagctc agaaaaacat 120
aaagcacctt gaaaaagact tggcagcttc ctgataaagc gtgctgtgct gtgcagtagg 180
aacacatcct atttattgtg atgttgtgggt tttattatct taaactctgt tccatacact 240
tgtataaata catggatatt tttatgtaca gaagtatgtc tottaaccag ttcacttatt 300
gtacctgg 308
```